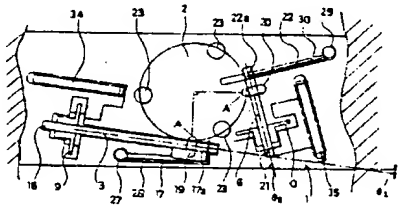
(54) DEVICE FOR INPUTTING X-Y COORDINATE
(11) 5-197489 (A) (43) 6.8.1993 (19) JP
(21) Appl. No. 4-10037 (22) 23.1.1992
(71) ALPS ELECTRIC CO LTD (72) HIROBUMI NIITSUMA
(51) Int. Cl⁵. G06F3/033

PURPOSE: To obtain an X-Y coordinate input device where the rotation quantity and rotation direction of a sphere to be rotated are surely detected and miniaturization is attained.

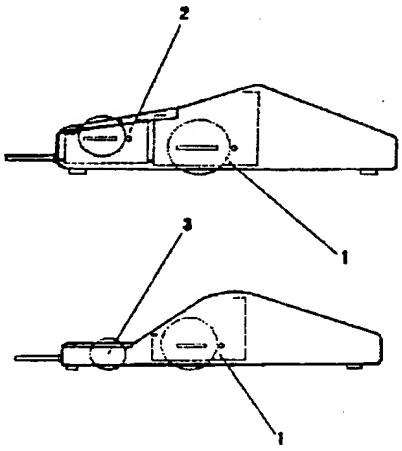
CONSTITUTION: Respective parts such as rollers 9 and 10, twist coil spring 21, etc., are arranged with the intersecting relation between the shaft line directions of both rotation shafts 3 and 6 as non-orthogonal arrangement so as to fill conventionally generated dead space. The projecting parts of the rollers 9 and 10, the twist coil spring 21, etc., are made to be diagonal so as to shorten projecting length.



(54) TWO-BALL MOUSE
(11) 5-197491 (A) (43) 6.8.1993 (19) JP
(21) Appl. No. 4-46438 (22) 20.1.1992
(71) HIROO YASUI (72) HIROO YASUI
(51) Int. Cl⁵. G06F3/033

PURPOSE: To enhance position input efficiency by assembling the functions of a mouse which is slid by means of a hand and a track ball which is moved means of a fingertip.

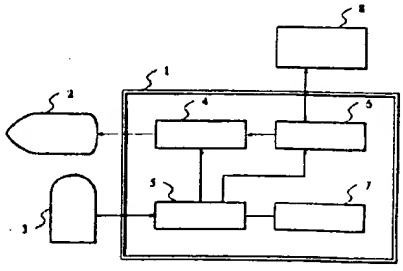
CONSTITUTION: A small track ball 2a is assembled at a fingertip position in a mouse mainbody 1 which is held by hand and the respective outputs are connected with a circuit. Or a simple ball 3 is attached, which rotates by exposing itself at the both sides of a back surface and a rear surface in the mouse.



(54) INFORMATION PROCESSOR
(11) 5-197492 (A) (43) 6.8.1993 (19) JP
(21) Appl. No. 4-8055 (22) 21.1.1992
(71) NEC OFF SYST LTD (72) MASATOSHI MARUO
(51) Int. Cl⁵. G06F3/033,G06F3/14

PURPOSE: To save the labor of an operator, which is necessary for the mouse button, by enabling menu selecting without pressing the mouse button.

CONSTITUTION: A display device 2 displays a character string, a graphic, a picture and a cursor. A mouse 3 detects a movement quantity and direction when the operator moves it on a desk. A mouse controller 5 transmits information concerning the mouse 3 from information received from a timer device 7 and the mouse 3 to a display controller 4 and an input/output controller 6. The timer device 7 has ability for measuring the passage of time. The display controller 4 controls the display device 2. The input/output controller 6 executes the report of a request from a host device 8 to the mouse controller and the display controller and the report of a phenomenon generated in the mouse controller and the display controller to the host device.



1: menu selecting device

Japanese laid open patent application 5-197491
Publication date:1993/08/06

[0001]
[Industrial Field for Utilization]

The present invention relates to a position input device of a computer or the like which is realized by adding the function of track ball to be moved by finger top to the mechanism of mouse slid by a hand.

[0002]
[Related Art]

As a position input device of the related art, there are provided a mouse for rolling the comprised ball while it is slid on the desk with a hand, track ball for which a ball of which center position is fixed is rotated in direct by a hand and a joy stick for inputting data via a manipulation rod.

[0003]
[Problems to be Solved by the Invention]

In the mouse as a main position input device of the related art, there is a problem in delicate manipulation for correction of deflection which is easily generated on the occasion of accurately designating the position on the display area because such manipulation is conducted through movement of wrist and arm. Moreover, there has been restriction that the moving range of mouse must be set rather wide. It is therefore an object of the present invention to overcome such problem and restriction by adding fine and delicate movement of fingers to such manipulation.

[0004]
[Means for Solving the Problems]

In order to attain the object explained above, in the double-ball mouse of the present invention, a small size track ball for fine manipulation is comprised at the finger top position of the mouse body held by a hand in view of connecting respective outputs with circuits.

[0005]

Moreover, in place of small size track ball explained above, it is also possible to conduct fine adjustment for the position of mouse body by simply attaching the ball exposed at the rear surface of mouse and both sides of the rear surface thereof and then moving it with the finger top.

[0006]

When the arrow pointer is moved to rough target position by moving the hand holding the mouse, accurate positioning may be done quickly only by moving the exposed ball with the finger top.

[0007]
[Embodiment]

A preferred embodiment will be explained with reference to drawings. In Fig. 1, a small size track ball (2) is comprised to the finger top position of the mouse body (1) held by a hand and respective outputs are connected with circuits.

[0008]

In the embodiment illustrated in Fig. 2, a ball (3) which is exposed at the rear surface of mouse and at both sides of rear surface thereof to rotate is attached to the finger top position of the mouse body (1) in place of the track ball (2) explained above and position of mouse body is fine adjusted by finger top.

[0009]

[Effect of the Invention]

The present invention is structured to utilize delicate and quick movement of finger top as explained above and therefore following effect may be attained.

[0010]

Moving range of mouse is set narrow in order to assure quick position input.

[0011]

Accurate position input is possible even when velocity of arrow pointer is raised.

[0012]

Velocity and accuracy of position input may be raised simultaneously by combining the functions of mouse and finger top track ball.

[Brief Description of the drawings]

[Fig. 1] Side view illustrating the embodiment 1

[Fig. 2] Side view illustrating the embodiment 2

[Description of Reference Numerals]

1: Mouse body; 2: Track ball; 3: Ball;